

**MINIMUM CYCLE SLIP AIRBORNE DIFFERENTIAL CARRIER  
PHASE GPS ANTENNA**

**ABSTRACT**

[00023] An antenna system is disclosed including a GPS antenna which is driven by an articulator in an opposite direction to aircraft roll. Aircraft roll is sensed by an onboard navigation system and translation module sends a signal to a processor which provides a drive signal to the articulator. As the aircraft rolls in one direction, the antenna is driven oppositely to maintain the vertical orientation of the antenna.